Migration of V0 Data into Release B

Because of the value of past remote sensing data to Global Change Research, NASA has elected to migrate Version 0 data to ECS as part of the overall Version 0-to-Version 1 transition. ECS is being designed for a long life cycle (at least two decades beyond the launch of the first EOS spacecraft) with architectural features that facilitate technology upgrades and evolution. Migration to ECS will ensure continued maintenance of these important historical Earth science data. After migration, ECS will provide information management, and data archive and distribution functions for past NASA Earth science flight missions and other Earth science data held by NASA. Users will gain access to improved services, new functions, and better performance. Version 0-to-Version 1 migration is being planned from a users' point of view to ensure continuous data availability throughout the migration process.

Migration of V0 data products into Release B involves two distinct steps: 1) migration and conversion of samples of V0 data and metadata for use in testing and validating the Release B design, and 2) population of operational Release B Data Servers with the migrated V0 data and metadata.

Currently there are no L4 requirements and only one L3 requirement related to V0 data migration: "SDPS 0085 - The SDPS shall support data products transitioned from V0 at a level of service equal to or greater than the level of service provided for those same data products by V0. The levels of service are defined in Appendix C of the ESDIS Project Level 2 Requirements, Volume 5 EOSDIS Version 0."

The Science Data Plan (SDP) identifies the level of service for each V0 data product as 1 (lowest) to 5 (highest), or H (high), M (medium) and L(low). The numerical categories (1 to 5) are defined in the reference cited above. Definitions for H, M, and L can be found in Appendix A of the SDP. According to the DAACs, levels of service in the SDP are approximations and vary considerably from product to product. In fact there is movement within the DAACs and ESDIS to replace levels of service with a list of available services for each data product. We interpret existing levels of service in the SDP as being primarily those provided by the system-level V0 IMS. However, we recognize that the DAACs are also implementing specialized local services and we will recommend approaches for migrating those services if the local services can be replaced with ECS core services. Further, we will identify DAAC-unique services that cannot be replaced by ECS core services for consideration and resolution by ESDIS.

The ECS V0 Data Migration Team has been working on various V0 data migration issues with respect to services, staffing, DAAC-unique interfaces etc. Some of these issues were identified by the DAACs during migration planning discussions. At the Level 4 Requirements Workshop, we'll discuss some of these issues in order to solicit feedback, and possibly recommendations, from attendees. Open data migration issues include:

(1) Some data products will be "live" at the time of migration, e.g. ISCCP at LaRC and SeaWiFS at GSFC with some data products stored in the V0 DAAC archive while current data products are produced on a daily basis. There will likely be other future additions to DAAC V0 archives.

(2) DAACs are continuing to develop unique services for V0 data products such as product-unique subsetting.

(3) Reaching consensus on deletion of data products is difficult. At some point, somebody has to make a decision about dropping data products.

(4) DAACs are receiving and producing data in multiple formats not just HDF.

(5) If higher-level data products are migrated to ECS, where and how is reprocessing accomplished?

(6) DAACs are providing a variety of tools which work with native formats. Conversion of the data to HDF-EOS could render the tool useless.

(7) Is there a requirement to migrate ancillary data products used to produce V0 data products?

(8) Metadata generated during processing outside of ECS (e.g. ASF on-demand processing or other DAAC-unique processing) may not satisfy ECS metadata needs.